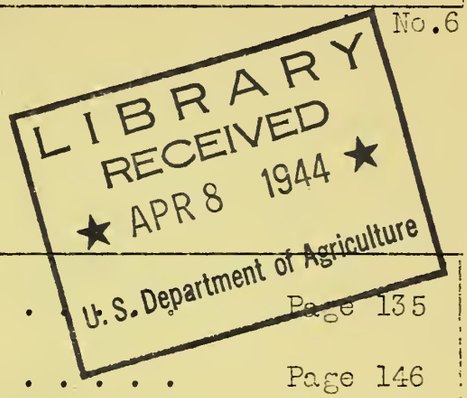
S O I L C O N S E R V A T I O N L I T E R A T U R E
SELECTED CURRENT REFERENCES

V.2 November/December, 1938 No.6



"The more extensive a man's knowledge of what has been done, the greater will be his power of knowing what to do." - Beaconsfield

Compiled By The Library Staff Of The Soil Conservation Service
From Publications Received In The
United States Department of Agriculture Library, Washington, D.C.

The publications listed herein may in most cases be borrowed from the Library of the Soil Conservation Service by members of the Washington and field staffs. For convenience, Library call numbers are given after each book and pamphlet entry. These should be included when requesting loans.

Mildred Benton
Librarian

PERIODICAL ARTICLES

Aerial Mapping

Aerial photographic mapping by U.S.Geological survey. Civ.Engin.8(10): 661-666,illus. October 1938.
Part I. Development of equipment and methods, by J.H.Pratt; Part II. Mapping with the multiplex aeroprojector.

Beavers

"Beaver man" contradicts long belief that beavers born in captivity will not breed. New England Homestead 3(17):3,9,illus. Aug.27,1938.
The work of the "beaver man" Edouard Lavoie is of a particular interest at this time because of the recent proposal to "plant"beavers along Idaho streams to aid soil erosion and conservation work.

Contour Furrows

Shuhart,D.V. Thirteen years of contour furrows. Soil Conserv.4(3): 72-74. September 1938.
Tells of furrows plowed for water conservation near Boomer Lake Dam at Stillwater,Oklahoma in 1925. The writer states that a critical study of the field which had been contour furrowed reveals some interesting points which may contribute something to the answers of questions concerning contour furrows.

Watson,W.R. Corrugation furrows in the Smoky Hill River project. Soil Conserv.4(3):65-66,illus. September 1938.
Describes "a unique type of contour furrow" developed by technicians at the SCS project located at Cheyenne Wells,Colorado.

Erosion

Khanna,R.K. Stable channels in erodible material. Ind.Engin.103(5): 168-169. May 1938.
Comment on Professor E.W.Lane's article bearing the same title which appeared in Proceedings,American Society of Civil Engineers, Nov.1935, pages 1307-1325.
The authors disagree on several points.

Woods,F.W. Du Buat's experiments[soil-erosive potential of streams of water]. Engin(London)165(4291):386-388,illus. Apr.8,1938.
"Historical review: Du Buat was one of the earliest research workers who discussed soil-erosive potential of streams of water;he defined 'bottom velocity' as 'velocity close to bed';it is shown that his conclusions as to 'bottom velocity' and mean velocity and 'velocity close to bed' must have been mistaken in spite of his apparently brilliant conceptions."--Civ.Engin.8(9):25. September 1938.

Farm Reservoirs

Howard,I.M. Rainstorms on tap. When rain is needed,it's needed badly and right away. Here's a scheme for storing rainy days on your farm,ready to turn on when you want them. Successful Farming 36(10): 18,44-45,illus. October 1938.
Recommends farm reservoirs.

Floods and Flood Control

Bates,C.G. Reforestation and flood control. Jour.Forestry 36(10): 1073-1079. October 1938.
Brief summary of a long paper which includes the basic data on which the statements made in the summary are based. Paper available at Lake States Forest Experiment Station.

Diebold,C.H. The effect of vegetation upon snow cover and frost penetration during the March 1936 floods. Jour.Forestry 36(11):1131-1137. November 1938.
"Literature cited," p.1137.
"Although foresters and engineers have long debated the value of forests as a means of flood control, relatively few studies have been made. The floods of March 1936 occurred during the period when the author was conducting intensive studies concerning the effect of vegetation upon snow cover and soil temperature. The data presented show that hardwood forests are a favorable influence which should be considered in flood control programs."

Flow of Water

Vibert,A. Le mouvement de l'eau dans le sol. Génie Civil.113(2916): 7-11. Jly.2,1938.
Theoretical mathematical analysis of flow of water through underground formations.

Grasses

Cates,J.S. Grass research begins. Country Gent.108(10):23,67,illus. October 1938.
Refers in particular to the grass breeding unit established at State College in central Pennsylvania.

Enlow,C.R. Problems affecting the establishment of grass in the Great Plains. Soil Conserv.4(3):75-79,illus. September 1938.
The writer points to the various factors which have caused changed conditions for the seeding of grasses and legumes,among them being less rainfall,higher temperatures and consequent higher evaporation, less storage for water in the soil,and a higher percentage of loss of rain through run-off.

Wilcox,W.F. Lytle lauds wheat-grass. West.Farm Life, Nov.1,1938, pages 4,19.
A non-irrigation farmer in the Rockies above Montrose,Colorado believes that crested wheat-grass is "destined to revolutionize the forage question in regions of limited rainfall where a better perennial grass has long been needed."

Hydraulic Laboratories

Cook,H.L. Spartanburg outdoor hydraulic laboratory. Unique research station specializes in hydraulic problems peculiar to soil conservation. Civ.Engin.8(10):653-655,illus. October 1938.
Hydraulic problems of conservation engineering;description of the laboratory;study of vegetal channel linings.

Infiltration

Kittredge,Joseph,Jr. Comparative infiltration in forest and open. Jour.Forestry 36(11):1156-1157. November 1938.
The author cites a "local but striking example" of infiltration of water into the soil. Near Berkeley,California he found that there was four times more rapid infiltration under the forest than in the open.

International Congress of Applied Mechanics

[International congress of applied mechanics. Abstracts in English of papers presented at fifth congress, Cambridge,Mass.,Sept.12 to 16,1938] Jour.Applied Mech.5(3):A-97-A-136. September 1938.
Partial contents:Flow through granular media, by B.A.Bakhmeteff and Feodoroff, page A-98; On the hydrodynamical theory of the viscosity of suspensions, by M.Greenspan, page A-109; Applications of the statistical theory of turbulence to hydraulic problems, by R.L.Jordan, page A-112; Curvilinear flow of liquid with a free surface at a velocity above that of wave propagation, by R.T.Knapp and A.T.Ippen, page A-113; Researches on the theory of river flow, by P.Massé, page A-114; Experiments on the mechanics of sediment suspension, by Hunter Rouse, page A-126.

Irrigation

Israelsen,O.W. The history of irrigation in Utah. Civ.Engin.8(10): 672-674,illus. October 1938.
Abridged from a paper given at the 1938 convention of the Irrigation Division,American Society of Civil Engineers.
"Farmers in Utah...were early confronted with two major irrigation problems - first, how to conserve water, and second, how to conserve soils. In 1888, when the Utah Agricultural Experiment Station was created, it set out to develop by scientific research a body of information on the conservation of these two resources...Recognizing the need of coordinating the two, it is helpful to attempt a résumé of findings with respect to each, as follows:
Water Conservation
1. There is a definite relationship between the amount of water

applied to a particular soil and the yield for a given crop. This relationship - designated the yield-water curve - has been experimentally established for a few soils and crops in Utah. It shows that above a certain minimum required to produce a crop, further increments in water produce less and less crop increase until an amount is applied that will produce the maximum yield. Amounts in excess of this cause either a decrease, or no increase in yield, and therefore are a waste of water.

2. Water is used efficiently by plants, and therefore conserved, when the soil-moisture content is so maintained that water is always available. To most plants water is readily available when the moisture content of the soil ranges from a minimum of 2 or 3 per cent above the wilting point up to capillary capacity.

3. Maintenance of a high degree of soil fertility by crop rotation, use of barnyard manure, and other soil amendments contribute to the efficient use of water by plants and thereby to the conservation of water.

4. Well-drained soils constitute valuable irrigation water reservoirs by virtue of their capacity to hold water in the capillary form. The capacity of the soil reservoir is influenced by the depth of the soil, its texture and structure.

5. Soil permeabilities are of great importance in the selection of methods and designs for farm irrigation systems.

Soil Conservation

1. In Utah considerable loss of fertile soils due to erosion has occurred either because of improper design, or lack of design, of irrigation distribution systems and drainage channels. The principles of design now understood by engineers, if properly applied, would prevent much soil erosion.

2. Upward flow of water from ground-water sources, with resulting evaporation at the surface and deposition of alkali salts, must be prevented to conserve irrigated soils in arid regions.

3. In some areas, application of water in excess of actual crop needs is essential to leach alkali salts from the soil.

4. In the low-lying areas of many valleys, artificial under-drainage is essential to make downward flow and leaching possible.

5. The alkali control and reclamation problem by artificial drainage in soils of fine texture, compact structure and low permeability is extremely perplexing. In attacking this problem, the engineer needs the counsel and cooperation of the chemist, agronomist and soil scientist."

Sokoloff, V.P. Effect of neutral salts of sodium and calcium on carbon and nitrogen of soils. Jour. Agr. Research 57(3):201-216. Aug. 1, 1938. "Literature cited," pp. 215-216.

Saline waters are frequently employed for irrigation purposes in the arid and semiarid regions of the Southwest. The amounts and the kinds of salts carried by irrigation waters determine to some extent the concentration and composition of the soil solution of irrigated lands. Comparatively little systematic interest has been manifested in ascertaining the influence of neutral salts on the microbiological transformations of the organic matter of soil such, for example, as lead to the production of carbon dioxide and nitrates.

The investigation reported was undertaken to determine these

transformations in two natural soils and in a third group prepared by leaching with sodium chloride a portion of one of the original soils.

Legumes

Klapp,E. The legumes of grassland. Herbage Rev.6(3):164-171. September 1938.
Translated by G.N.Rosevcare from Forschungsdienst Suppl.6:226-232. 1937.

Lespedezas

Pieters,A.J. The native American lespedezas. Soil Conserv.4(3): 84-86,illus. September 1938.
"The object of this discussion is to call attention to [the eleven most common]lespedezas,to attempt such nontechnical description as will be usable,and at the same time to point out the distinguishing features of at least the more common species."

Lister Mulcher

The lister mulcher. Farm Impl.News 59(19):21,illus. Sept.22,1938.
Describes a lister or row-crop mulcher devised by a Kansas farmer, Gail Challis of Russell Springs,Kansas,which employs straw or any other farm refuse.
"The objectives primarily are to conserve moisture and prevent soil blowing.First the field is furrowed with the lister.Then the mulching machine is pulled along the row,or behind the lister when both jobs are done at the same time,and straw that has passed through a combine or thresher is deposited at the bottom of the furrow and slightly covered at the sides.One ton of dry threshed straw will mulch from 3 to 5 acres of land.
"Used at this rate in furrows that do not have more than 3 o/o slope, it is stated that the mulch will absorb a heavy rain without any run-off as well as preventing the crusting of the surface of the soil in the lister furrow."

Muskingum Conservancy District

Jenkins,Hal. Muskingum looks back - and ahead. Amer.Forests 44(9): 409-411,431,illus. September 1938.
What has been accomplished in five years through cooperative effort in the Muskingum Watershed Conservancy District and plans for the future which include completion and development of artificial lakes, a land utilization and agricultural program and development of public parks for recreational areas and for the restoration of wildlife.

Raindrop Impact Measurement

Neal,J.H.and Bauer,L.D. Measuring the impact of raindrops. Jour.Amer. Soc.Agron.29(8):708-709,illus. August 1937.
Describes an apparatus constructed to measure and automatically record the impact of falling drops of water.

Rain Gauges

Rain gauge system. Civ.Engin.8(10):12(adv.section) October 1938.
Describes briefly a system which has been in use in the Philippine Islands for several years, called the Hildabrand Remote Recording Rain Gauge System.

Range and Pasture Management

Doughty,T.E.and Fiero,Kenneth. Range conservation on Big Horn Draw. Soil Conserv.4(3):62-63,illus. September 1938.
Indicates improvements on a range,which is a segment of the Shoshone Indian Reservation,on Little Wind River,21 miles north of Lander, Wyoming,as a result of the building of a drift fence,removal of surplus livestock,gully control,construction of stock water dams and spreader ditches.

Lister,P.B. Seasonal utilization of forage plants. Cattleman 25(3):29-30,illus. August 1938.
"A detailed 3-year experiment designed by the author to show seasonal differences,if any,in the utilization of important forage plants has recently been completed and the data analyzed by the most up-to-date methods.The end results of this study are herein presented in a practical way."

Nielson,A.B. Soil conservation practices on range and pasture lands show increased ranch income. Soil Conserv.4(3):69-71,illus. September 1938.
The 1,322 acre livestock-wheat ranch of a pioneer settler at Pomeroy in Garfield County,Washington is here described as an example of typical results obtained through the establishment of a sound,long-time agricultural program.

Semple,A.T. Livestock industry benefits from range management program. Soil Conserv.4(3):61,71,74. September 1938.

Stoddart,L.A.and Wilkinson,K.J. Inducing germination in Oryzopsis hymenoides for range reseeding. Jour.Amer.Soc.Agron.30(9):763-768. September 1938.
"Literature cited,"p.762.

Run-off Measurement

The story of one heavy rainstorm. Calls attention to New York's soil erosion problem and methods of solving it. Farm Research(N.Y.Agr. Sta.)4(4):4. October 1938.
Calls attention to the rainstorm of unusual intensity which occurred on August 10 at the Geneva station and soil and water losses as indicated by experimental plots.

Youngquist,C.V. Ohio stream flow. Some limitations of the unit hydrograph method of estimating surface water run-off. Ohio Eng.Exp.Sta., Columbus.Eng.Exp.Sta.News 10(3):21-22,illus. June 1938.

Schools for Soil Conservation Methods

Gum,E.P. A school for soil protection. Banking 31(3):28. September 1938.
Mr.Gum,secretary of the Oklahoma Bankers Association relates the efforts of Oklahoma bankers in promoting soil conservation in their state by means of a school in line running and terracing.

Kansas agent sponsors contour surveyors' school. U.S.Dept.Agr.Ext. Serv.Rev.9(8):116. August 1938.
Describes school in Thomas county,Kansas which "graduates" certified surveyors of guidelines for contour furrowing and farming.

Sedimentation and Silt

Forester,D.M. The desilting works at Imperial dam. Reclam.Era 28(8): 152-156,illus. August 1938.

Haller bros. A new method of silt control [in South Africa].Primary dams as "vlei" builders with secondary dams for storing filtered water. Farmer's Weekly 55:201,illus. Mar.30,1938.

Johnson,J.W. A theory of silt transportation. Discussion. Amer.Soc. Civ.Engin.Proc.64(7):1524-1528. September 1938.
Discusses a paper by W.M.Griffith published in the May 1938 issue.

Sharma,P.K.R. Automatic silt extractors without loss of water. Ind.Engin.103(1):17-18,illus. January 1938.
Includes diagram and description of silt extractor constructed in India.

Wilson,A.N. The stability of earthen channels. Ind.Engin.103(5):158. May 1938; 103(6):203. June 1938; 104(1):29. July 1938.
Part II indicates the effects of silt on regime dimensions and Part III, the experimental verification of silt effects.

Shipmast Locust

Raber,Oran. The history of shipmast locust. Jour.Forestry 36(11): 1116-1119. November 1938.
"Literature cited," p.1119.

Toole,E.R. Relative durability of black locust and shipmast locust when subjected to four wood decay fungi. Jour.Forestry 36(11): 1120-1122. November 1938.

Soil Chemistry

Aderikhin,P.G. The influence of desiccation of soil on the mobility of its components. Pedology no.2,1938, pages 248-256.
"Drying tended to reduce the mobility and solubility of soil cations and anions. The maximum nitrate content in chernozem and podzol soils occurs when they are dried to about 60 per cent of their total moisture capacity. Air dried soil samples do not therefore represent the true condition of the soil in the field." - Soils and Fert.1(4):144. 1938.

Prince,A.L.,Toth,S.J.and Blair,A.W. The chemical composition of soil from cultivated land and from land abandoned to grass and weeds. Soil Sci.46(5):379-389,illus. November 1938.
"References,"p.389.

[Sanfourche,M.] La solubilité des phosphates dans les solutions du sol or l'ascension capillaire(Phosphate solubility in soil solutions and capillary rise) Comp.Rend.Acad.Agr.France 24(13):469-478. Apr.27,1938.
"During the process of the drying out of a soil,soluble phosphates tend to concentrate on the surface but if they become insoluble their distribution in the different layers of the soil is homogeneous."- Soil and Fert.1(4):145. 1938.

Soil Conservation District Law

Hopkins,Howard. Recent developments in cooperative opportunities between federal and state forest agencies. Jour.Forestry 36(11): 1110-1115. November,1938.
"The problems facing the private owner of forest land may be approached through increased public ownership of forest land, public regulation,or cooperative effort. The author prefers the cooperative method. During the past few years at least six federal laws have been enacted providing for more extensive cooperation between the federal government and the private owner. The possible application and the possibilities of these laws[one of which is the Soil Conservation District Law]are described in detail."

Soil Erosion and Control. Foreign Countries

Bonné,A. Natural resources of Palestine. Geogr.Jour.92(3):259-266. September 1938.
"In view of the importance of forests for Palestine,because of their functions in arresting soil erosion,as a storage reservoir for the exiguous rainfall,and as an ameliorator of climatic extremes,the value of systematic afforestation policy cannot be over-emphasized. It is practically impossible to recapture the abundant rain-water on the hill-tops once it falls to earth,because in the absence of forest earth it percolates through to the lower strata of rock and is lost. Therefore it is believed that the final solution of the water problem - i.e.conservation of rainfall - can only be achieved by systematic afforestation,upon which Government and Jewish institutions have begun work in recent years."

Collier,F.S.and Dundas,J. The arid regions of northern Nigeria and the French Niger colony. Empire Forestry Jour.16(2):184-194. 1937.
The general character of the region has not altered during the historical period,but human occupation,with extensive clearing of the forests and over-utilization of the soil,is exposing the soil to wind and water erosion,which results in unregulated run-off. Control measures include land use classification and establishment of forest reserves on land that should not be cleared.

Gerrie,R.M. Soil erosion in India. Nature 142(3595):560-561,illus. Sept.24,1938.
Substance of a paper read before the Royal Society of Arts on May 3,1938.
Gives new Indian statistics on erosion losses.
Contrasts American run-off data with tentative data of the same sort for India.

Hampel,Robert. Wort und ausführung von kulturarbeiten in wildbachen (Cost and execution of silvicultural works along torrential streams) Wiener Allg.Forst -u.Jagd-Ztg.56:143-144. Jly.1,1938.

Lieberberg,J.C. Soil-erosion control in the Union. VI. Run-off and veld improvement. Farming So.African.13(148):269-270,illus. July 1938.

Olson,Lois. Poor man's cow. Soil Conservation 4(4):96-99. October 1938.
Historical discussion of the damage done to European lands by huge herds of goats in destroying the vegetation and exposing the soil to erosion.

Sellschop,J. The work of the Upington research station. Farming So.Africa 13(148):253-255,276. July 1938.
"A Research Station has been established on Major Island at Upington[Gordonia District,South Africa]for the benefit of approximately 2,500 farmers who occupy the irrigable soil along the Orange River...In the lay-out...certain important principles have been followed to protect fields against erosion and the intense effects of wind on loose sandy soils. Tillable land has been kept on the highest possible elevation in the levelling thereof. Fields have been given even widths in order that water,which may cover them completely, is not forced through narrow passages ('slopes'). Levees(embankments) on three sides of the Station allow silt-carrying water to flow in slowly on to the lowest open side only instead of rushing through the entire length of the grounds. To avoid eroding of the levees,elephant grass (Napier fodder) has been planted along their sides,of which the dry canes have been packed on the levee sides in order to overcome blowing away of soil while it is not yet overgrown by couch or quick grass."

Sobolev,S.S. Study of gully erosion on the territory of the European part of the U.S.S.R. Pedology no.2,1938, pages 231-247.
Mapping and classification of erosion types.

Wickes,R.R. and Lowdermilk,W.C. Soil conservation in ancient Peru. Soil Conservation 4(4):91-94,illus. October 1938.
Bibliographical footnotes.
"...Without iron implements, wheels or draft animals, without a knowledge of chemistry or of writing, the ancient Peruvians developed an agriculture which persisted through hundred of years, mastered soil erosion, and is still continuing, with slight change, over considerable areas... For intelligent industry, for solving problems in land use which we have not yet the temerity (or need) to undertake, for

preventing soil erosion, and for the conservation of soil and water, the ancient inhabitants of Peru must be acknowledged as the first soil conservationists of the New World".

Winters,N.E. Erosion problem confronts Hawaii. Soil Conservation 4(4):101-103,illus. October 1938.
Discussion of the development of the Hawaiian Islands and the erosion problems existent.

Soil Fertility

Soil fertility and economic nationalism. Soils and Fert.1(4):135-137. 1938.

Soil Microbiology

Eggleton,W.G.E. The influence of environmental factors on numbers of soil microorganisms. Soil Sci.46(5):351-363. November 1938.
"References," pp.362-363.

Soil Moisture

Conn,H.J.and Darrow,M.A. The effect of moisture changes on soil as a medium for bacterial growth. Soil Sci.46(5):365-377. November 1938.
"References," p.377.

Goller,I.A.and Kavetsky,N.S. A volumetric modification of moisture determination in structural soil units. Pedology no.1, 1938, pages 131-135.
"The moisture percentage of an aggregate, of a known capillary suction power, is determined by measuring the amount of water necessary for the complete capillary saturation of the aggregate." — Soils and Fert.1(4):150. 1938.

Koposov,I.P. Soil moisture as a factor of structure formation. Chemisation of Socialistic Agr. no.3, 1938, pages 99-108.
"A study of the effect of alternate wetting and drying on the aggregate composition of soils with an exchange complex saturated with Ca and Mg." --Soils & Fert.1(5):195. 1938.

Soil Physics

Chapek,M.V. The solid phase of the soil and the dispersion medium. Pedology no.3, 1938, pages 372-415.
Article in Russian.
"A review considering the main problems of the interaction between the solid phase of the soil and water. A classification of the categories of water in the soil is proposed and their characteristics described." - Soils & Fert.1(5):195. 1938.

Freckmann,W.and Baumann,H. Zu den grundfragen des wasserhaushalts im boden und seiner erforschung(II.Teil)(Basic problems of moisture economy in soil and its investigation. Part II) Bodenk.Pflernahr. 7(3/4):129-161. 1938.
"Tank and field tests of the distribution of moisture in soil during the growth period of different crops grown in rotation. The soil moisture status after a crop depended a good deal on the type of crop used."- Soil and Fert.1(4):152. 1938.
Abstract also in Chem.Abs.32(21):8654. Nov.10,1938.

Hielscher,M. Untersuchungen über die wasserbewegung im boden(Investigations of water movement in soil) Bodenk.Pflernahr.7(5/6): 257-278,illus. 1938.
"Water was extracted from the soil under reduced pressure and the amount extracted plotted against time. The curves show that there are 3 categories of moisture. Cracking occurred in all the soil under reduced pressure except in pure sand and clay soils." - Soils and Fert. 1(4):151. 1938.

Soil Structure

Sideri,D.I. On the formation of structure in soil: V.Granular structure. Soil Sci.46(3):267-271,illus. September 1938.

Stream Flow

Hertzler,R.A. Determination of a formula for the 120-deg V-notch weir. Civ.Engin.8(11):756,illus. November 1938.
Describes weir designed to measure stream flow from zero to 26 cu ft per sec. in connection with the "forest influences" investigations now being made by the Appalachian Forest Experiment Station which involves a study of the effect of vegetative cover and land use on stream flow.

Water Facilities Program

Kenney,F.R. Water for the west. The water facilities program gets under way. U.S.Bur.Agr.Econ.Land Policy Rev.1(3):1-5,illus. Sept/Oct.1938.

Wildlife Management

Davis,K.S. Game fits into a system of soil-saving,money-making farming; and affords a Minnesota neighborhood real enjoyment in the bargain. Successful Farming 36(10):9,40-43,illus. October 1938.

Wind Erosion

Bennett,H.H. Emergency and permanent control of wind erosion in the Great Plains. Sci.Mo.47(5):381-399,illus. November 1938.

Cooperative community action applied to wind-eroded county in Montana. U.S.Ext.Serv.Rev.9(9):133,illus. September 1938.
Assisting the farmers in northeastern Valley County,Montana in putting a total of 15,800 acres under wind-erosion control were the county A.A.A.committee,Soil Conservation Service and the Montana Extension Service.

Lamb,H.H. Wind erosion in Scotland. Nat.Mag.73(872):209-210. September 1938.
Brief report on "unusual devastation on the ploughed and sown land" at Montrose on April 2,1938.

MacMillan,R.T. Farm families in the dust bowl. U.S.Bur.Agr.Econ. Land Policy Rev.1(3):14-17. Sept/Oct.1938.
Reports some of the findings of recent sociological studies by the Farm Security Administration in Baca county,Colo.and Haskell and Seward counties,Kans.which should influence the formulation of land policies.

Watson,W.R. Economic units for the dust bowl. Soil Conserv.4(3): 80-81,88,illus. September 1938.
Outlines the objectives and some of the results of the cooperative program in the dust bowl and bordering areas carried on by the Soil Conservation Service and the Farm Security Administration.

BOOK AND PAMPHLET NOTES AND ABSTRACTS

Adamson,R.S. Vegetation of South Africa. 235pp.,illus. London, British Empire vegetation committee,1938. (Monographs of British empire vegetation) 460.46 Ad1
References at end of each chapter.

American geophysical Union. Transactions of ...nineteenth annual meeting April 27 to 30,1938,Washington,D.C.;regional meetings, December 28 to 29,1937,Spokane,Washington;January 7 to 8,1938,Davis, California;June 21,1937,Denver,Colorado(addendum) 2 parts,illus. Washington,D.C. Published by the National research council of the National academy of sciences,August 1938. 330.9 Am3
Part 1. Reports and papers,Washington,D.C.,general assembly and sections of geodesy,seismology,meteorology,terrestrial magnetism and electricity,oceanography,volcanology and hydrology.Partial contents of Section of hydrology are as follows:Report of committee on snow, 1937-38,J.E.Church,chairman(including a bibliography of current publications compiled by Carl Elges and Robert G.Stone)pp.281-314;Report of committee on evaporation from water-surfaces,S.T.Harding,chairman, pp.321-324;Report of committee on runoff,W.G.Hoyt,chairman,pp.324-326; Report of committee on physics of soil-moisture,1937-38(effect of organic matter on the infiltration of water into soils)F.J.Veihmeyer, chairman(including bibliography)pp.326-342;Report of Soil conservation service special advisory committee,Robert E.Horton,chairman,pp.351-353; Report of special committee on flood-waves,1937-38,Lorenz G.Straub, chairman,pp.353-355;Report on activities of subcommittee relating to governmental activities of the special committee on flood waves,May 1938,W.G.Hoyt,chairman,pp.355-362;Report of subcommittee on current investigations of special committee on flood-waves,pp.363-368;Rain wave-trains,by R.E.Horton,pp.368-374;Seddon's and Forchheimer's formulas for crest-velocity of flood-waves subject to channel-friction control,by R.E.Horton,pp.374-382;A study in the theory of flood-waves, by E.E.Moots,pp.383-388;Some of the factors influencing the behavior

of perched water-tables at the North Appalachian experimental watershed near Coshocton,Ohio,pp.393-402;Experimental water-spreading for ground water storage in Salt Lake Valley,Utah,1936,by A.J.Lazenby, pp.402-412;Determination of infiltration-rates from surface-run-off, by L.K.Sherman,pp.430-435;

Part II. Reports and papers,Section hydrology and western interstate snow-survey conference.Partial contents of Section of Hydrology are as follows:A new interpretation of the hydrologic cycle,(abstract)by C.W.Thornthwaite and Benjamin Holzman,pp.595-596;Hydrometeorology - a coordination of meteorology and hydrology,by Merrill Bernard,pp.598-602; Precipitation and vegetation,by R.R.Woolley and J.C.Alter,pp.604-607; The practical application of the rigorous evaporation-equations(abstract) by N.W.Cummings,pp.607-608;A recording evaporimeter,by Jarrett Oliver and N.W.Cummings,pp.609-612;Evaporation from soils and transpiration, by F.J.Veihmeyer,pp.612-619;Forest and range hydrology in relation to water supply,by J.W.Gross,pp.619-629;Watershed management from the viewpoint of the forester,by E.I.Kotok,pp.629-634;Forest and range hydrology as influenced by livestock,by G.H.Hart,pp.634-640;Causes and control of major floods,by R.D.Goodrich,pp.647-653;The effect of silt removal and flow regulation on the regimen of Rio Grande and Colorado rivers,by J.C.Stevens,pp.653-659;European hydrologic activities,by Samuel Shulits, pp.668-669.

Partial contents of Section of Western interstate snow-survey conference are as follows:Establishing first-year normals on the basis of accumulated snowfall and some forecasts from runoff-ratios,by R.C.Farrow, pp.689-694;Winter precipitation versus snow-survey for forecasting on Skagit river,Washington,by Robert Leaver,pp.695-699.

Association internationale d'hydrologie scientifique. Sixième assemblée générale à Edimbourg du 14 au 26 1936... 645pp.,illus. Pithiviers (Loiret) Imprimerie des Caisses d'Epargne[1937?] (Bulletin 22)
292.9 As7

Articles in English,French,Italian and German.

Includes bibliographies.

Partial contents:The load of the river Fyris in central Sweden,by Filip Hjulstrom,pp.74-82;Evaporation.Critique des instruments et des méthodes d'observation.Choix d'un evaporomètre standard,by Octave Mengel,pp.99-113;Measurement of evaporation,instruments used,critical discussion of the results,by C.Braak,pp.114-118;"Sore subjects"in the methods for determination of evaporation from the water-surface,by V.K.Davydov,pp.142-153;Evaporation - a brief review of methods and results,by E.G.Bilham,pp.155-165;The circulation of water in the soil between the surface and the level of underground water,pp.328-331; Water in soil and its movement,by F.J.Veihmeyer and N.E.Edlefsen,pp. 355-365;Study of water circulation in layer between the surface of soil and the ground-water level,pp.366-375;Relation of hydraulic and laboratory research to physical and economic geography,by R.E.Horton, pp.610-623.

Association of land-grant colleges and universities.Proceedings,fifty-first annual convention...Washington,D.C.,November 14-17,1937... 374pp. [New Haven,Conn.,Quinnipiack press,incorporated,1938]
4 As7 51st,1937.

Partial contents: The Soil Conservation Service program for 1938, by D.S.Myer,pp.124-126.

Carpenter,J.R. An ecological glossary. 306pp. Norman, University of Oklahoma press,1938. 409 C223
"Literature cited in glossary,"pp.298-300.
"Historical bibliography,"pp.301-306.

Champaign co.,Ill.Regional planning commission. Planning the network of our streams, Champaign county,Illinois. 46pp.,illus. Urbana, March 1938. (Planning Study no.2) 280.7 C35P no.2
"Study is largely composed of statements from 30 citizens who have been connected in some way with the problem. The various observations made show the relation of the county streams to the daily life of the inhabitants and the conclusions point to the need for comprehensive planning to prevent pollution and erosion and to provide better drainage and establish the proper relation between water utilization and conservation and between the streams and roads and recreation." -- Review, Amer.City, April 1938, p.139.

International management congress. [Agricultural papers of] seventh international management congress, Washington, D.C. September 19th to September 23rd,1938. 158pp.,illus. Baltimore,Maryland, The Waverly press,inc.[1938] 249.09 In807
The papers given at the five sessions of the section on agriculture are printed in English,French,German and Italian.
Those of special interest are as follows:Session I.Land and soil resources. The management of our land resources, by C.L.Holmes,pp.3-6; The management of our soil, by R.V.Allison,pp.7-11;Session II.Crops and forests:their production,protection and use. More efficient plants, by E.F.Gaines,pp.30-33.

New England research council on marketing and food supply. Proceedings of the annual meeting...held on November 8 and 10,1937 at Boston, Massachusetts. 86 numb.l. Boston,Mass.,[1937] 252.004 N443M
Partial contents:The flood control program of the Department of Agriculture,by C.I.Hendrickson,pp.65-69.

North American wildlife conference. Transactions of the third... conference, February 14,15,16,17,1938...Baltimore,Md.held under the auspices of the American wildlife institute. 901pp.,illus. Washington,D.C.American wildlife institute,1938. 412.9 N814 3d 1938
Papers of special interest to members of the Soil Conservation Service are as follows:Food and cover plant nurseries and planting out methods for wildlife in the Great Plains,by W.M.Sharp,pp.538-542; The farm fence in wildlife management and erosion control,by F.C. Edminster,pp.583-591;Wildlife management in the Muskingum watershed conservancy district,by R.J.Nesbit,pp.592-596;Wildlife food patches: result of four years of observation in southwestern Wisconsin,by J.R.Fry,pp.730-735;Utilization of woody plants as food by wildlife pp.768-775;Productivity of the ruffed grouse in New York,pp.825-833.

Northern nut growers association. Report of the proceedings of the twenty-eighth annual meeting,College Park,Maryland and Washington,D.C., September 12-15,1937. 144pp. [n.p.,1937?] 94.69 N81 28th 1937
Tree crops,a permanent agriculture,by J.Russell Smith, pp.67-69.

Oklahoma farm chemurgic conference, 1st, Oklahoma City,1937. Proceedings of the first Oklahoma farm chemurgic conference...in Oklahoma City's civic center, November 8 and 10,1937. 135pp., processed. [Oklahoma City,1937] 281.9 Ok4
Partial contents: The relation between soil conservation and farm chemurgy,by N.E.Winters, pp.1-11.

Oregon state engineer. Water resources of the state of Oregon. Summary of available information 1931-1936. Compiled and prepared under the direction of Charles E.Stricklin,state engineer,in cooperation with the United States Geological Survey... 728pp. Salem, September 1937. (Bulletin no.9) 292 Or3 no.9

Oxford farming conference. The third Oxford farming conference, Taylor institution, Oxford, January 4-7,1938. Under the joint auspices of the School of rural economy, the Agricultural economics research institute, the Institute for research in agricultural engineering of the University of Oxford. Papers and discussions. 157pp. [Oxford, Printed at the Alden press, 1938] 5 Ox223rd, 1938
This conference was devoted to the problem of maintaining the fertility of the soil,the general aspects being presented in the opening address by J.A.S.Watson, Sibthorpian Professor of Rural Economy at Oxford. Among other papers presented were the following: Our grassland,by J.A.Hanley,pp.19-25;A system of alternate husbandry as applied to heavy clay soils in the eastern counties,by W.S.Mansfield, pp38-46;Alternate husbandry on light land,by R.F.Crouch,pp.47-56;Some economic aspects of grass conservation,by A.Bridges,pp.116-132.

Rouse,Hunter. Fluid mechanics for hydraulic engineers. 422pp.,illus. New York and London, McGraw-Hill book company, 1938. 334 R76

Royal geographical society of Australia,South Australian branch. Proceedings...volume XXXVI, session 1934-35. 110pp.,illus. Adelaide, Advertiser Newspapers Limited, 1936. 514 R81 v.36
Shifting sands - the growth of the menace in Australia, by A.E.V. Richardson, pp.43-51.

Uganda. Soil erosion; memoranda by governments of Uganda, Kenya and Tanganyika. 11pp. Nairobi, Kenya colony, Printed by the government printer, 1938. 56.7 Ug1
At head of title; Conference of governors of British East African territories, June 1938.
Each memorandum reports on anti-erosion measures.

Wisconsin.Department of public instruction. Teaching of conservation in Wisconsin schools. 71pp.,illus. [Madison ?]May 1937. (Wisc. Dept.Public Instruction. Curriculum Bull.v.1,no.1) 279 W752
Bibliographies at end of each chapter,with one exception.

Zimmer,W.J. The flora of the far north-west of Victoria,its distribution in relation to soil types,and its value in the prevention of soil erosion. 86 numb.l.,mimeogr. [Melbourne?]1937 460.34 Z6

STATE EXPERIMENT STATION AND EXTENSION PUBLICATIONS

Arizona

Stanley,E.B.and Hodgson,C.W. Seasonal changes in the chemical composition of some Arizona range grasses. Ariz.Agr.Exp.Sta.Tech.Bull.73. 466pp.,illus. Tucson,June 15,1938. 100 Ar4[t]no.73
The grasses studied were blue grama,hairy grama and curly mesquite.

Arkansas

Turner,L.M. Some profile characteristics of the pine-growing soils of the coastal-plain region of Arkansas. Ark.Agr.Exp.Sta.Bull.361. 52pp.,illus. Fayetteville,June 1938. 100 Ar42[b]no.361
"Literature,"pp.50-52.

Georgia

Georgia. College of agriculture. Annual report.Research and investigational activities for the fiscal year ending June 30,1938...edited by Frank B.Lanham. 75pp.,illus. [Athens,1938] (Bull.v.38,no.10) 276 G29An
Experiments on soil erosion control,by W.O.Collins and W.N.Danner,Jr., pp.18-19.

Illinois

Wascher,Herman,Smith,R.S.and Smith,L.H. Vermilion county soils. Ill.Agr.Exp.Sta.Soil Rpt.62. 36pp.,illus. Urbana,June 1938. 100 Il6So no.62

Indiana

DenUyl,Daniel, Diller,O.D.and Day,R.K. The development of natural reproduction in previously grazed farmwoods. Ind.Agr.Exp.Sta.Bull.431. 28pp.,illus. Lafayette,July 1938. 100 In2P no.431
Issued in cooperation with Central States Forest Experiment Station, U.S.Department of Agriculture,Columbus,Ohio.

Iowa

Iowa state college of agriculture and mechanic arts,Ames. The role of the land-grant college in governmental agricultural programs,prepared by a committee of the faculty of Iowa state college. 14pp. Ames, [1938] 281.12 Io9

Kansas

Eier,H.F.and Stover,H.E. Terracing to control erosion. Kans.Agr.Col. Ext.Bull.70,rev. 44pp.,illus. Manhattan,June 1938. 275.29 K13E no.70 rev.

Missouri

Clark,Marion and Wooley,J.C. Terracing,an important step in erosion control. Mo.Agr.Exp.Sta.Bull.400. 47pp.,illus. Columbia,July 1938. 100 M693[b]no.400

Nebraska

Doll,E.H.and Gross,D.L. Brome grass for erosion control. Nebr.Agr. Col.Ext.Circ.119. 8pp.,illus. Lincoln,June 1938. 275.29 N272Ex no.119

New York

Spaeth,J.N.and Diebold,C.H. Some interrelationships between soil characteristics,water tables,soil temperature,and snow cover in the forest and adjacent open areas in south-central New York. N.Y.Cornell Agr. Exp.Sta.Mem 213. 76pp.,illus. Ithaca,June 1938. 100 N48C[m] no.213 "References,"pp.75-76.
Suggests the relation of the facts brought out in the study to the problems of reforestation,silvicultural management,soil classification, and flood control in south-central New York, pp.62-71.

Ohio

Sitterley,J.H.and Falconer,J.I. Better land utilization for Ohio. Ohio State Univ.Col.Agr.Dept.Rural Econ.Mimeogr.Bull.108. 107 numb.l., illus.,mimeogr. Columbus,June 1938. 281.9 Oh32 no.108
The present report,with certain revisions and enlargements,is based upon an earlier report entitled"Major land-use problem areas and land utilization in Ohio",Mimeographed Bulletin 79,issued in March 1935.

U.S. GOVERNMENT PUBLICATIONS

Department of Agriculture

Connaughton,M.P. Advance report on the sedimentation survey of Hayes lake,Hayes,South Dakota,June 8-15,1937... in cooperation with South Dakota agricultural experiment station, Brookings,South Dakota... U.S.Soil Conserv.Serv.Div.Research,Sedimentation Studies SCS-SS-20. 28 numb.l.,mimeogr. Washington,D.C.,July 1938. 1.96 R31R SS-20

Davis,A.M. Erosion on roads and adjacent lands. U.S.Dept.Agr.Leaflet 164. 8pp.,illus. Washington, U.S.Govt.print.off.,September 1938. 1 Ag84L no.164

Gaines,S.H.compiler. Bibliography on soil erosion and soil and water conservation,compiled by Stanley H.Gaines with abstracts by Francesca Vincent, Marion Bloom and James F.Carter. U.S.Dept.Agr.Misc.Pub.312. 651pp. Washington, U.S.Govt.print.off.,October 1938. 1 Ag84M no.312.

Graf,D.W. Irrigation;a selected bibliography. 631pp.,mimeogr. Washington,D.C.,U.S.Bureau of Agricultural engineering,1938. 1.9 En32I
Covers the United States as well as foreign countries.

Jones,V.H. Advance report on the sedimentation survey of Baker reservoir,Baker,Montana,May 24 to June 6,1937...in cooperation with Montana agricultural experiment station, Bozeman,Montana... U.S.Soil Conserv.Serv.Div.Research.Sedimentation Studies.SCS-SS-21. 15 numb.l.,maps.,mimeogr. Washington,D.C.,July 1938. 1.96 R31R SS-21

Jones,V.H. Advance report on the sedimentation survey of Mission lake, Horton,Kansas,April 15 to May 6,1937... in cooperation with Kansas agricultural experiment station, Manhattan,Kansas... U.S.Soil Conserv. Serv.Div.Research.Sedimentation Studies SCS-SS-22. 9 numb.l.,illus., mimeogr. Washington,D.C.,July 1938. 1.96 R31R SS-22

Jones,V.H. Advance report on the sedimentation survey of Wellfleet reservoir, Wellfleet,Nebraska,May 10 to 19,1937... U.S.Soil Conserv. Serv.Div.Research.Sedimentation Studies SCS-SS-23. 16 numb.l.,illus., mimeogr. Washington,D.C.,July 1938. 1.96 R31R SS-23

Lord,Russell. To hold this soil. U.S.Dept.Agr.Misc.Pub.321. 123pp., illus. Washington, U.S.Govt.print.off.,August 1938. 1 Ag84M no.321
"Recommended reading," p.[124]

Meginnis,H.G. The pole-frame brush dam - a low-cost mechanical aid in reforesting gullied land. U.S.For.Exp.Sta.Southern,New Orleans,La. Occasional Paper 76. 8pp.,illus.,mimeogr. New Orleans,Aug.15,1938. 1.9 F76240 no.76
Describes a type of brush dam,developed by the writer in 1932 in connection with early studies carried on by the Southern Forest Experiment Station near Holly Springs,Marshall County,Miss.

Pieters,A.J. Legumes in soil conservation practices. U.S.Dept.Agr. Leaflet 163. 8pp.,illus. [Washington, U.S.Govt.print.off.,1938] 1 Ag84L no.163
Contribution from Soil Conservation Service and Bureau of Plant Industry.

Pieters,A.J. Soil-depleting,soil conserving,and soil-building crops. U.S.Dept.Agr.Leaflet 165. 8pp.,illus. Washington, U.S.Govt.print. off.,September 1938. 1 Ag84L no.165

Rowalt,E.M. Soil Defense in the south. U.S.Dept.Agr.Farmers' Bull. 1809. 64pp.,illus. Washington, U.S.Govt.print.off.,1938. 1 Ag84F no.1809.
The scope is limited to that part of the Cotton Belt extending west from the Georgia - Alabama line to central Texas and southern Oklahoma. Its subject matter is based largely on the soil conservation practices employed by farmers who live within the various project areas of the Soil Conservation Service in this section of the cotton country.

Rowe,P.B.and Ilch,D.M. An infiltration study of a denuded and a forest covered soil. U.S.Forest and Range Exp.Sta.,Berkeley,Calif. Research Note 14. 3 numb.l.,illus.,mimeogr. Berkeley, Jan.20,1937. 1.9 F7626R no.14

U.S.Department of agriculture. Office of the secretary. Statement concerning state legislation for state and local cooperation with the flood control program of the Department of agriculture. 3 l.,mimeogr. Washington, D.C.,October 29,1938. 1.9 Ag86Stc

U.S.Extension service. Division of cooperative extension. Federal-state relations for agricultural planning. 19 numb.l.,mimeogr. [Washington, D.C.,1938?] 1.9 Ex891 Stencil no.870-38.
Paper presented at the Mount Weather,Va.Conference on Federal-State Relations and Agricultural Planning July 7,1938,by C.E.Brehm,Director, Tennessee Agricultural Extension Service.

U.S.Forest experiment station,Appalachian,Asheville,N.C. Manual for the compilation of hydrological data from small drainage areas. 53 numb.l.mimeogr. Asheville,June 1938. 1.9 F7623M
"This manual has been prepared by L.K.Hill...and K.A.MacKichen..."

U.S.Soil and water conservation experiment station,Bethany,Mo. Soil and water investigations;progress report of the problem area of Shelby loam and related soils...1930-35. U.S.Soil Conserv.Serv.Div.Research. Section of Soil and Water Conserv.Exp.Sta.SCS-ESR-5. 180 numb.l., illus.,mimeogr. [Washington,D.C]June 1938. 1.96 R31R no.5
By C.M.Woodruff and D.D.Smith.
In cooperation with the Missouri agricultural experiment station.
For distribution to cooperators and technicians.
"Literature cited,"11.187-180.
The foreword by W.C.Lowdermilk indicates the three factors affecting land use,namely,the needs of society for plant and animal products, the productivity of the soil,and the integrity of the soil.

U.S.Soil conservation service, Southeastern region,Spartanburg,S.C. Channel hydraulics,prepared by D.W.Cardwell...and R.D.Gladdins... under the direction of A.Carnes... 24,xv numb.l.,illus.,mimeogr. Spartanburg,March 1938. 1.9608 C36
Lettered on cover: "Preliminary material to be included in a regional engineering handbook in preparation."

Van Dersal,W.R. Native woody plants of the United States,their erosion-control and wildlife values. U.S.Dept.Agr.Misc.Pub.303. 362pp.,illus. [Washington, U.S.Govt.print.off.]June 1938. 1Ag84M no.303.
An elaboration of a work which first appeared in preliminary,mimeographed form in 1936 under title "Handbook of Native Woody Plants of the United States."

SOIL SURVEYS

Michigan. Soil survey of Saginaw county. Series 1933,no.19. June 1938.

Nebraska. Soil survey of Holt county. Series 1932,no.27. June 1938.

New York. Survey of Onondaga county. Series 1934,no.7. April 1938.

Ohio. Soil survey of Vinton county. Series 1933,no.21. July 1938.

Geological Survey

Grover,N.C.,Parber,D.H.,Burchard,E.D.,Dirzulaitis,J.J.,Johnson,A.E.et al. Surface water supply of the United States 1936. Part 2. South Atlantic slope and eastern Gulf of Mexico basins. U.S.Geol.Survey.Water-Supply Paper 802. 228pp.,illus. Washington, U.S.Govt.print.off.,1938. 407 G29W no.802

Grover,N.C.,Batchelder,C.L.,Beckman,H.C.,Grosbach,H.E.,Kasel,R.G.et al. Surface water supply of the United States 1936. Part 5. Hudson Bay and Upper Mississippi river basins. U.S.Geol.Survey.Water-Supply Paper 805. 287pp. Washington, U.S.Govt.print.off.,1938. 407 G29W no.805

Grover,N.C.,McGlashan,H.D.and Canfield,G.H. Surface water supply of the United States 1937. Part II. Pacific slope basins in California. 353pp.,illus. Washington, U.S.Govt.print.off.,1938. 407 G29W no.831

Rubey,W.W. The force required to move particles on a stream bed. U.S.Geol.Survey.Prof.Paper 189-E. pp.121-141,illus. Washington, U.S.Govt.print.off.,1938. 407 G27Pr no.189-E

Miscellaneous

U.S.Library of congress,Division of bibliography. Conservation of natural resources in the United States:a selected list of recent writings(supplementing the mimeographed list of March 21,1934): compiled by Anne L.Baden... 72 numb.l.,mimeogr. [Washington,D.C.] 1938. 241.3 Un3Cn
Land and soil,pp.24-32.

U.S.Bureau of reclamation. Boulder canyon project. Final reports. Part VI - Hydraulic investigations. Model studies of penstocks and outlet works. 165pp.,illus. Denver, Colorado, 1938. (Bulletin 2) 156.85 B662 no.2
"This bulletin is one of a series prepared to record the history of the Boulder Canyon project,the results of technical studies and experimental investigations,and the more unusual features of design and construction.A list of the bulletins available and tentatively proposed for publication is given at the back of this report."

U.S.Tennessee valley authority. Legal department. A compilation of the more important congressional acts,treaties,presidential messages, judicial decisions,and official reports and documents having to do with the control,conservation,and utilization of water resources. 117,lvi numb.l. [Knoxville,Tenn.]March 15,1938. 173.2 T25 Com
Prepared by Francis W.Laurent.
Flood control, 1.64-79.
Materials pertaining to the Tennessee river system and the Tennessee Valley authority act,Appendix J, l.xxii-xxxiv.

BIBLIOGRAPHIES AND LISTS OF REFERENCES COMPILED IN THE LIBRARY, SOIL CONSERVATION SERVICE *

A list of scientific publications of the U.S. Soil Conservation Service. 2pp.,typed. October 12,1938.

Soil and water conservation in Tennessee. 5pp.,typed. October 7,1938.

TRANSLATIONS ON FILE IN THE SOIL CONSERVATION SERVICE LIBRARY

Lenard,P. On rain. Met.Ztschr.21:249-262. 1904.
Translated from the German,"Uber Regen"by H.H.Conkling;edited for technical meaning by J.Otis Laws.

Livshits,E.S. Investigation of soil transportation by means of timber flumes. Sci.Res.Hydrotech.Lab.Studies,v.1,1937,pages 163-172.
Translated from the Russian by R.S.Minicker.

Schoklitsch,Arnim. The silting of reservoirs and scour prevention. 113pp.,illus.,typed.
Translated from "Strauraumverlandung und Kolkawehr" by W.P.Ott and C.J.Van Uchelen.
Bibliographies taken from each chapter are appended at the end of the translation.

Shamov,G.I. Investigation of morphological types of formation of cross bars and of flood-plain deposits of the Volga river. Sci.Res.Inst.Hydrotech.Trans.16:201-208. 1935.
Translated from the Russian by S.N.Nosledov.
University of California,Department of Mechanical Engineering,Works Progress Administration Project no.58. Translation no.112.

* May be borrowed for copying.

FINIS